SUBJECT: Medical and Health Physics Support of the Refuge Headquarters

This ideal location for a medical headquarters at the refuge headquarters would be a one story field stone structure at ground level. In this structure could be housed all the basic medical support items as well as a health physics laboratory. This combination infirmary and health physics laboratory could very easily be housed in a structure such as this with a floor space of approximately 2000 square feet. This would include storage space as well as actual operating space.

It is suggested by this department that a small amount of space in the basement of one of the other buildings be allotted for the purpose of housing small laboratory animals. The amount of space for the laboratory animals should be in the vacinity of 300 square feet of space. It is expected that this space so allotted would be used for animals, i.e., guinea pigs and rabbits for various laboratory tests, that might be indicated to support the refuge in case of biological or radiological warfare.

Since only decontaminated personnel and equipment will arrive at this point, the amount of radioactive isotopes will be strictly limited to standardization of monitor equipment and the design and construction of new health equipment to serve the collecting points and the intermediary decontamination center.

It is not anticipated by this department that any casualties from the atomic blast will be treated directly at this point, so that the amount of space for infirmary facilities would not exceed that required under normal circumstances for a community of 600 persons.

A four bed ward attached to a standard treatment room would serve this purpose adequately.

If the refuge headquarters is so designed that it will function from two centers in close proximity, a small treatment room with a single cot could be placed in the secondary headquarters area, and this area could fall upon the main headquarters area for medical support.

The remaining portion of the infirmary in the main headquarters area should be allotted to a health physics laboratory. Although this laboratory will not serve in any direct capacity with respect to headquarters, it will serve directly in the health physics aspects of (1) the decontamination center and (2) the five collecting points on the periphery of Washington.

The person in charge of this health physics laboratory should have the training as previously outlined and should have under his supervision a group of eight to ten technicians who are trained to build, repair and maintain radiation equipment. In addition to this, the health physicist and the medical officer will review the number of working Rours, as well as the approximate amount of radiation each member of monitor teams is exposed to. This aspect will also include the personnel attached to the decontamination center.

Either by direct visit or by radio communication the readings on the pocket monitors and/or film badges will be reviewed by the health physicist, and he can evaluate the amount of time that each worker can be exposed to radioactive contamination in any of the five collecting points or the decontamination center.

When a worker receives his maximum daily tolerance dose, he will be relieved of his duties and be replaced by a member of his own unit, i.e., monitor survey teams will alternate their own men, decontamination center teams will alternate among themselves. This will not only facilitate the problem of working hours locally but will prevent a shifting of personnel and equipment from one area to another.

With respect to medical support at the refuge headquarters, there are three distinct functions cited:

- (1) the medical support of 150-200 men in training at the refuge headquarters
- (2) the medical support of an added 400 persons and
 (3) the medical and health physics support of the five collecting points, the decontamination center and the refuge headquarters following the atomic blast.

In support of the first function, the infirmary should have on hand the following list of supplies to support the group of 150-200 students on an outpatient basis. This could be best managed from a pharmacy room in the infirmary stocked with the following list of items:

In support of the second function at the refuge headquarters it would be only necessary to multiply the items in List No. 8 by a factor of 3.0 and arrive at a figure that adequately supports a community of 600 persons on an outpatient basis.

In support of the third function at the refuge headquarters, it is assumed that supplies of medicines, surgical equipment and radiation monitor equipment will not only service this area, but will serve as a supply depot for such equipment for the five collecting points and the decontamination center:

The following materials should be on hand to replenish exhausted supplies in any of the six other stations.

- 1. List #1 x 5 2. List #2 x 5 3. List #3 x 5 4. List #4 x 5 5. List #6 + 1
- 7. List #7 + 1 8. List #8

In addition to List #8, the following radiation equipment would be necessary for the headquarters health physics laboratory:

					•
SC-6A	Automatic sample changes		1	9	\$ 950.00
SC-5A	Tracergraph printing interval		val timer 1	0	450.00
E-2A	Sample Storage Cabinet		4	0	25.00
E-1	Sample tray		40	9	1.50
E-34	Absorbers set of 25 calibrated				
	absorbers 1 0			50,00	
E-4A	Ma	t planchets	1000	•	6.00/1000
E-5	Cupped planchets		200	8	2.00/100
E-20	Cupped planchets		200	ē	5.00/100
E-6	Pyrex cooking dishes		36	0	5.00/doz
E-7	Brass rings and discs		36	0	12.00/402
E-23	Interlocking lead bricks		70	-W	Street & comments of the street
	complete set as follows:				
	B-23A	Full bricks	16	0	10.00
	E-23B	Half bricks	16	0	7.50
	E-230	90° corner	16	8	5.00
	B-23D	120° corner	8	0	5.00
	E-23E	Male end	4	0	5.00
	B-23F	Female end	4	•	5.00
E-17	Ren	ote handling tongs	4	•	25.00
B-18	Renote pipetting device		2	9	50.00
	Lauritsen electroscopes		4	3	60,00

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It is estimated that the total cost of radiation equipment in the five collecting points, in the decontamination center and the refuge headquarters will amount to approximately \$33,570.00.

The work done in this decontamination center would be under the direct supervision of the medical officer and health physicist from the refuge headquarters. Attached to the decontamination center on a personent basis should be a minimum of six technicians who are trained in the management of contaminated material. These technicians would not require the specialised training of those attached to the refuge headquarters but should be sufficiently trained to supervise the pursonnel working in the sawage disposal plant, the laundry and the createry, and to be able to recognize any breaks in technique at these points. These breaks in technique on the part of personnel working in these areas, as well as problems of disposal, etc., should be reported to the health physiciet at the earliest possible moment.

It is estimated that a total of 100 persons working in the laundry, decontamination room, crematory, and sewage disposal plant would be adequate. The problem of workers reaching their daily tolerance dose while working with exposure to radioactive isotopes can best be solved by working in shifts. The length of their shifts will best be determined by the health physicist and medical officer, when the daily dosage of exposure has been computed with certain radioactive isotopes; a worker can be exposed for only a few minutes a day and in other instances he can work for a few hours with certain other isotopes.

The medical and radiation equipment in this decontamination center will serve to support itself as well as supporting the five periphoral collecting points in case of an unpredicted loss of personnel and equipment at any of these points.

It would be appreciated by this office if consultation could be obtained from any other office in the Agency for the construction of

(1) a decontamination shower room for personnel and equipment.

(2) a sewage disposal plant for contaminated waste.
(3) the construction of a laundry for decontamination of clothing

(4) the construction of a crematory for disposal of items which are considered expendable.

The actual bed space for casualties, as previously described, will be used for the treatment of personnel who demonstrate evidence of burns, shock, radiation sickness, etc. This space would be used for this treatment in the event that civilian facilities are overcrowded or such cases are missed in the survey.



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and in addition to this equipment the following items should be added:

(see attached list)